



# Operating Manual

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## *Adapter cable VAS 6558A/39-2*



Adapter cable VAS 6558A/39-2  
CAR-connect GmbH®

## Document identification

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Note/addition:	Application examples in which a vehicle or a vehicle-specific module is displayed are approved by the vehicle manufacturer.

## Imprint

Title:	Adapter cable VAS 6558A/39-2
Order number:	ASE 405 480 00 000
Product manufacturer:	<p>CAR-connect GmbH          Celler Str. 117          D-38518 Gifhorn          Phone: +49 (0) 5373 – 92197-0          Fax: +49 (0) 5373 – 92197-88  <a href="mailto:info@car-connect.cc">info@car-connect.cc</a>  <a href="http://www.car-connect.cc">www.car-connect.cc</a></p>
Reproduction:	Reproduction or reprinting, even in part, always requires the written permission of the manufacturer.
Validity:	This operating manual is only applicable to the described product. The latest release for documentation is shown in revision management in the chapter “document identification”.
Place of storage:	The operating manual is an essential part of the product and is to be kept with the product in its transportation box or protective case. In addition to the paper forms, electronic delivery forms are also permitted.
Target group:	These operating instructions are intended for the trained electrician, who has received training in technical and supervisory responsibilities for working with high-voltage systems of motor vehicles.



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# 1 Concept

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The adapter cable is designed as per the latest measurement and control technology regulations. The adapter cable corresponds with the state of the art and fulfils the VW standard 75174, the relevant European standards as well as partially fulfilling international standards for measuring equipment accessories.

Despite high standards for development, production and quality, only careful handling and proper use can ensure that there is no damage and resulting consequences. For this reason, this operating manual should be read and understood in full.

## 1.1 Read the operating manual

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Read these operating instructions through carefully, before using the adapter cable. In this operating manual, the intended use and hazards of handling the product are described.

In addition to this operating manual, other regulations may be binding for diagnosis or troubleshooting of intrinsically safe high-voltage systems in road vehicles. These include, among other things, the manuals of the vehicle manufacturer as well as the instructions of the employers' liability insurance association.

Please ensure that all information on the product and its scope of application is available to you before you use the adapter cable. Please use the adapter cable only if you have fully understood all information pertaining to its use.







## 1.2 Structure of the document

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For a better understanding of the information contained in this operating manual, additional descriptive pictograms are used. These markings indicate particularly relevant information and the images indicate the significance within a description or an operation step.

Therefore, please follow the instructions and information in this operating manual, so that there is no bodily injury or property damage when used in the high-voltage section of the vehicle.

The following table contains all the pictograms, warning symbols and symbols that may appear in this manual.

	<p><b>INFORMATION:</b> Follow the operating manual.</p>		<p><b>DANGER!</b> Fatal hazard! High voltage.</p>
	<p><b>NOTE:</b> Follow general instructions.</p>		<p><b>WARNING!</b> Warning of dangerous electrical voltage. There is a risk of fatal hazard!</p>
	<p><b>PROHIBITED!</b> For people with a pacemaker or defibrillator. There is a risk of fatal hazard!</p>		<p><b>ATTENTION!</b> Please note the following:</p>



## 2 Safety instructions

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The basic safety instructions given below must be followed to avert bodily injury to people and property damage while using the adapter cable.

### 2.1 General safety instructions

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Most incidences of damage to property and personal injury are primarily due to ignorance or negligence and can be avoided from the outset if the following general safety instructions are observed:

- Read the operating manual carefully before use.
- Only people who can provide valid proof of technical knowledge of working on high-voltage systems in motor vehicles may perform measurements on high-voltage systems.
- Follow the instructions given in the vehicle manufacturer's guided troubleshooting such as the application description in PIWIS Tester.
- Use the adapter cable testing adapter **only** in closed and dry spaces.
- Follow the instructions of the trade association or government institutions for the repair of hybrid- and all-battery electric vehicles.
- Check the adapter cable regularly before use, as per the vehicle manufacturer's instructions.
- Use the adapter cable **solely** for the intended use — as specified by the vehicle manufacturer.
- Use the product **solely** for its intended purpose.
- **Immediately** replace a defective or damaged product.
- **Never** attempt to modify or manipulate the adapter cable.
- **Never** attempt to supply current or voltage to other devices through the adapter cable.
- Do not use aggressive liquids to clean the product.
- Prevent the adapter cable from coming in contact with aggressive operating fluids such as brake fluid and coolant.





## 2.2 Proper use

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The adapter cable VAS 6558A/39-2 is a connection cable that is used along with the adapter cable VAS 6558A/39-1 for diagnosis on high-voltage systems of road vehicles manufactured by Volkswagen. When the vehicle is de-energized on removal of the high-voltage battery, this adapter cable set enables the restoration of the communication interfaces between the high-voltage battery and the vehicle. For this, the work instructions in the guided troubleshooting must be followed.

## 2.3 Improper use

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Any use of the product deviating from the intended use is considered improper use. Use of a manipulated or defective adapter cable will be considered in exactly the same way as disregarding or disobeying the instructions of the operating manual. This behaviour, in addition to limiting the guarantee and the loss of warranty claims, can also lead to bodily injury to people or damage to property under certain circumstances.

## 2.4 Obligations of the operator

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The operator must ensure that appropriate and capable staff is appointed by them to work on vehicle-specific high-voltage system. The proof of qualification required for this is based on successful participation in appropriate training. The operator must ensure that the measuring equipment and accessories are in a faultless condition and they do not have any defects.

Regular inspection periods for the measuring equipment, accessories and testing adapters are set out in an instruction manual. Also, it is the operator's responsibility to note the replacement of the adapter cable set on reaching the number of operation cycles. The operator must ensure that servicing staff regularly participate in refresher training courses for repairs of high-voltage systems and pass these successfully as well.

## 2.5 User's qualifications

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The user has proven expertise to carry out work on high-voltage systems of fully battery-operated, plug-in hybrid or e-traction road vehicles. In addition, the user should have experience in taking cascade measurements, whereby active and passive measurements are taken simultaneously.

### 3 Transport

The product comes in recyclable disposable packaging, which is **not suitable for storing** the product after use.

#### 3.1 Unpacking and checking for completeness

Check the condition and completeness of the contents based on the shipping documents and the delivery note. In case of any damage or defective components, contact the manufacturer immediately.



Item	Name
1	Adapter cable VAS 6558A/39-2
2	USB-stick with operating manuals in EU national languages

Fig. 1: Scope of supply of VAS 6558A/39-2

#### 3.2 Transport during normal working hours

The adapter cable VAS 6558A/39-2 is used along with the adapter cable VAS 6558A/39-1 as a set and should be transported after diagnosis in a suitable transport container. Please ensure that moisture and dirt do not enter the container.

### 3.3 Safekeeping and storage

In order to avoid damage to the adapter cable or to prevent the loss of accessories, always keep the cable in a transport case. This procedure gives you a quick overview and the assurance that the step is complete in all respects. The diagnosis is complete when all the parts that belong to a set are returned to the appropriate place in the case.

## 4 The adapter cable

After removing the high-voltage batteries, the missing communication connection between vehicle electronics and high voltage batteries must be restored for system diagnosis.

An adapter cable set, made up of two cables with different configurations (VAS 6558A/39-1 and VAS 6558A/39-2), is required between the high-voltage batteries and the vehicle E-Box for interface connections.

With the adapter cable VAS 6558A/39-2, the connection from the vehicle-side E-Box (BMCE) to the high-voltage battery (level 1) is established.



Fig. 2: Adapter cable VAS 6558A/39-2

The adapter cable has a length of 3 metres and is almost completely clad with a braided sheath to protect against damages. To prevent the braided sheath from slipping, it is fixed at the ends with shrink-on sleeve end pieces.



Fig. 3: Adapter cable with plug-side strain relief

The connector housings are encoded to prevent polarity reversal at the interfaces. The eight-wire adapter cable is additionally equipped with two white wires on the socket housing end, which provide strain relief.

#### 4.1 Product labelling

Product labelling on the adapter cables is done using plastic tags. The following tables describe individual tags and explain the signs shown.

Labelling on the front side has the following data.



 <b>VW AG   VAS6558A/39-2</b> <b>ASE 405 480 00 000</b>	
VW AG VAS 6558A/39-2	Product name
ASE 405 480 00 000	VW order number
	Seal of approval of the organisation

Fig. 4: Labelling on the front side



On the back side of the pair of tags, you will find the following information.

	Disposal instructions
	Read the operating manual
	Conformity mark
SN:	Serial number
	Logo of the manufacturer
www.car-connect.cc	Manufacturer homepage

Fig. 5: Labelling on the rear side

## 4.2 Technical specifications

<b>Voltage range:</b>	<12 VDC
<b>Cable length:</b>	3000 mm
<b>Type of cable:</b>	FLRY
<b>Cable cross-section:</b>	0.35 mm <sup>2</sup>
<b>Cable protection:</b>	PET braided sheath with strain relief on the socket housing side
<b>Area of application:</b>	Use only in dry and closed rooms.





<p><b>Conditions of use:</b></p>	<p>The adapter cable can be used up to a temperature of 50 °C.</p> <p>The adapter cable can be used up to a relative humidity of 85%.</p> <p>The adapter cable is designed for storage in the temperature range from -20° C to 60° C.</p>
<p><b>Cleaning:</b></p>	<p>Clean the testing adapter only with a dry cloth.</p>

## 5 Operation

Before you can start testing the high-voltage components, ensure that the vehicle is de-energised. Follow the guidelines given in the guided diagnostics in the PIWIS Tester. Additionally, observe the following safety rules.

	<p><b>PROHIBITED!</b></p> <p>Heart pacemakers and implanted defibrillators may be rendered inoperable by strong magnetic fields or high currents.</p> <p>People with these implanted devices should <b>not</b> carry out any work on high-voltage systems.</p>
	<p><b>DANGER!</b></p> <p>When working on high-voltage systems of the vehicle, high-voltage DC can lead to short-circuits and voltage flash-overs. <b>FATAL HAZARD!</b></p> <p>Carry out work on HV-systems <b>only</b> in the absence of voltage.</p>
	<p><b>WARNING!</b></p> <p>Live high-voltage or low-voltage cables represent a source of danger that <b>should not be underestimated.</b></p> <p><b>Never</b> touch live wires and cable connections. This can lead to <b>life-threatening</b> situations.</p>
	<p><b>ATTENTION!</b></p> <p>Before beginning work, check the adapter cable's operability.</p>




	<p><b>INFORMATION:</b></p> <p>Before beginning work, read all maintenance and repair information from the vehicle's manufacturer.</p>
	<p><b>NOTE:</b></p> <p>While working on the high-voltage system, avoid static discharges, as they may damage the electronic components.</p>

### 5.1 Insert adapter cable

The adapter cable VAS 6558A/39-2 is inserted and used as per the vehicle manufacturer's specifications. Please follow the instructions in the guided vehicle diagnostics in the PIWIS Tester.

## 6 Maintenance/Care

No provisions are made by the device manufacturer for maintenance of the adapter cable.


	<p><b>INFORMATION:</b></p> <p>In addition to this operating manual, also read the operating instruction from the vehicle manufacturer and operator.</p>
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### 6.1 Clean adapter cable

The adapter cable should **only** be cleaned with a dust-absorbing cloth made of antistatic material. The line must **never** come into contact with liquid cleaners, aggressive cleaning agents or water in any form (splash water, dripping water, high-pressure cleaning water).


## 7 Disposal

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 A blue circular icon containing a white exclamation mark, indicating a warning or important note.	<p><b>Note:</b></p> <p>The product must <b>not</b> go into domestic waste at the end of its working life. The operator is the owner responsible for disposal according to the applicable European law and bears the responsibility for appropriate disposal.</p> <p>If other laws governing the disposal or recycling of electrical appliances have priority regarding validity and application, these country-specific regulations are binding for the process.</p>
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### 7.1 Product life cycle

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 A yellow triangular warning icon with a black border and a black lightning bolt symbol, indicating high voltage or electrical hazard.	<p><b>DANGER:</b></p> <p>The product life cycle of the adapter cable is coupled with the operating cycles in which it is adapted in the high-voltage system. With more than 2000 cycles, the adapter cable must be replaced and must <b>not</b> be used any longer.</p>
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### 7.2 Environmentally responsible waste disposal

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If the product's life cycle has come to an end, the adapter cable must be taken away for sorted disposal. The adapter cable operator bears the responsibility for this as the owner responsible for disposal. The sale or gratuitous licensing for the purpose of disposal must be documented.





## 8 Customer service

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If you have any questions about the product or need additional service information, then you can contact Customer Service at:

CAR-connect GmbH  
Celler Str. 117  
D-38518 Gifhorn  
Phone: +49 (0) 5373 – 92197-0  
Fax: +49 (0) 5373 – 92197-88  
[info@car-connect.cc](mailto:info@car-connect.cc)  
[www.car-connect.cc](http://www.car-connect.cc)